

REMARKS

The Official Action of June 11, 2008, and the prior art relied upon therein have been carefully reviewed. The claims in the application are now claim 2-9, and these claims define patentable subject matter warranting their allowance. The applicants therefore respectfully request favorable reconsideration and allowance.

Applicants again respectfully request the PTO to acknowledge receipt of applicants' papers filed under Section 119. Please note that the present application is the U.S. National Phase of PCT/JP2004/005061, wherein the PTO has received a copy of the priority application from the International Bureau of WIPO. In this regard, please note the penultimate line on the first page of the Notice of Acceptance mailed by the PTO in the present application on September 6, 2006.

New claims 8 and 9 have been added, based on original claims 4 and 5 to the extent that claim 4 was originally dependent on and from claim 3. These claims are patentable for the same reasons as the other claims as pointed out below.

For the record, applicants note that there have been no objections to the claims as to form, and no rejections have

been imposed under Section 112, and applicants are proceeding in reliance thereof.

Claim 1 has been rejected as anticipated by Winge USP 6,399,357 (Winge).

Claim 1 has been deleted without prejudice, and applicants therefore need not address this rejection at the present time. However, applicants respectfully reserve the right to pursue claim 1 and/or similar claims at a later date, e.g. in a continuing application, if applicants choose to do so, relying on Sections 120 and 119.

Claims 1, 2, 4 and 6 have been rejected under Section 103 as obvious from Winge in view of Chang USP 5,250,662 (Chang). This rejection is respectfully traversed.

The rejection insofar as it applies to claim 1 need not be addressed at the present time, noting applicants' remarks above.

Claim 4 depends from and incorporates the subject matter of claim 2. Accordingly, applicants respectfully reply by focusing on claims 2 and 6 and the non-obviousness over the prior art of the embodiments covered by claims 2 and 6.

The process embodiments covered by claims 2 and 4 relate to preparing an albumin preparation by first (a) filtering an albumin-containing solution with a virus removing

membrane, and then (b) heat treating in a liquid state an amount sufficient to inactivate virus, e.g. at 60 °C for ten hours. According to claim 4, the solution is further treated with an anion-exchanger and/or a prefilter before the filtration step (a).

As recognized by the examiner, Winge does not disclose or teach the claimed heat treatment in the liquid state. However, the rejection concludes that it would have been obvious to the person of ordinary skill in the art to modify the method of Winge by using a combination of steps including heat treatment or anion-exchange filtration, that the skilled person would have been motivated to do so in order to further purify the albumin, and that there would have been a reasonable expectation of success, all based on Chang, because Winge and Chang teach purification of albumin for therapeutic applications. Applicants respectfully submit that such a modification of Winge would not have been obvious; and that, even if were obvious to modify Chang in view of Winge, the resultant reconstructed Winge would not correspond with the claimed subject matter.

Chang broadly discloses a method of purifying albumin using a combination of precipitation and anion-exchange chromatography. The rejection focuses on Chang at column 18, lines 42-45, part of example 9 which states as follows:

Heat-shocking of the stabilized albumin solution was then performed for two hours at 60°C., using a circulating glycerol heating system. After the two-hour heat-shock, the solution was chilled to 9°C.

Applicants respectfully submit that there is **no reason** one would have adopted the heat-shocking procedure of Chang's example 9 for incorporation into and modification of Winge for reasons pointed out below; and that even if such a "heat-shocking" operation were incorporated into Winge, it would not result in applicants' embodiments as called for in claim 2.

In this regard please consider the following facts.

First, example 9 of Chang relates to a purification method (acetone and heat-shock purification) which was prior to Chang, and compares the prior art example 9 process with the process of Chang. Chang thus teaches **away from the prior** acetone and heat-shock purification method. It cannot be considered to have been obvious to adopt something from Chang which Chang effectively denigrates.

Second, the heat-shock treatment of example 9 of Chang is not intended to inactivate virus. There is no indication in example 9 of Chang of the presence of any virus, and there is no certainty that the heat-shocking performed for two hours at 60°C would inactivate virus if any virus were present.

Third, although Chang mentions several filtration steps in the criticized example 9 processes, the filtration is

not related to the removal of virus. Again, no virus is disclosed as being present. Applicants respectfully ask what reason would the person of ordinary skill in the art have for adopting the heat-shocking and filtration steps of Chang for removing virus when example 9 of Chang does not even indicate the presence of virus? Respectfully, there is no reason.

Fourth, the filtration of example 9 of Chang with the 90 S filter (column 18, lines 46-49) was carried out **after** the heat-shocking treatment, which is just the reverse of the process of the present invention where the filtration is carried out **before** the heat treatment. In this regard, again, Chang teaches away from the present invention. Adopting such a filtration with the 90 S filter would be contrary to the embodiments of claims 2 and 4.

To briefly summarize, the person of ordinary skill in the art, considering both Winge and Chang together, would not have come up with the process of claim 2 for the reasons pointed above. Withdrawal of the rejection as applied to claims 2 and 4 should therefore be withdrawn, and such is respectfully requested.

As regards claim 6, it covers embodiments wherein the albumin-containing solution is first subject to anion-exchange and/or a prefilter and then to filtration with a virus-moving membrane.

Winge discloses virus filtering, but not the preliminary steps of claim 6. Chang at column 1, lines 38-44, simply discloses uses for albumin, regarding which there is no dispute. Otherwise, the rejection appears again to rely only on the denigrated process of Chang's example 9, which has nothing to do with freeing albumin of virus. Applicants see no reason given in either Winge or Chang to employ an earlier prefiltration and/or anion-exchange prior to filtration with virus-removing membrane of Winge. The combination only appears in retrospect to have been obvious, but it was not obvious at the time the present invention was made.

Withdrawal of the rejection is in order and is respectfully requested.

With respect to the commentary appearing at the bottom of page 4 and carrying over to the top of page 5, applicants respectfully submit that reliance on *In re Aller* is unjustified, because the Court in *Aller* acknowledged that conditions and parameters cannot be brushed aside if they produce a different result.¹ It will be seen from example 1 of the present application (pages 16 and 17), that the results produced according to the present invention are substantially improved as shown in Fig. 1 (see page 17, lines 7-14).

¹ See for example the recent case of *Ex parte Atkinson et al*, BPAI Appeal No. 2007-3900 (Dec. 18, 2007).

Claims 1, 3, 5 and 7 have been rejected under Section 103 as obvious from Winge in view of Chang as applied against claims 2 and 6, and further in view of Burnouf, citation AH, and a reference entitled: "Planova Filters" citation U. This rejection is respectfully traversed.

First, claims 3 and 5 depend from and incorporate the features of claim 2. Burnouf and Planova have not been cited to make up for the deficiencies of the proposed combination of Winge in view of Chang as pointed out above, and do not do so.

Therefore, even if further modification of Winge in view of Burnouf and Planova were obvious, the so modified Winge would not reach even claim 2, let alone claims 3 and 5. The same applies to claim 7 which depends from and incorporates the features of claim 6.

Applicants respectfully note that they have never alleged to be the inventors of the filters in question, or to have discovered the size of the viruses eliminated according to the present invention. Instead, the present invention relates to a process which accomplishes a particular objective in a new and non-obvious way, and which results in the unexpected improvements which are pointed out in applicants' specification, including example 1.

Withdrawal of the rejection is in order and is respectfully requested.

The prior art documents of record and not relied upon by the PTO have been noted, along with the implication that such documents are deemed by the PTO to be insufficiently material to warrant their application against any of applicants' claims.

Applicants believe that all issues raised in the Official Action have been addressed above in a manner that should lead to patentability of the present application. Favorable consideration and early formal allowance are respectfully requested.

Respectfully submitted,

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